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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,327	09/27/2006	Ryoji Noyori	129542	3317
25944 7590 02/04/2009 OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				
EXAMINER				
GALE, KELLETTE				
ART UNIT		PAPER NUMBER		
1621				
MAIL DATE		DELIVERY MODE		
02/04/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/594,327

**Applicant(s)**

NOYORI ET AL.

**Examiner**

KELLETTE GALE

**Art Unit**

1621

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-19 and 21-31 is/are pending in the application.
- 4a) Of the above claim(s) 12-14-16, 18, 19, 21, 22, 24, 25, 27, 28, 30 and 31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11, 13, 17, 23, 26, and 29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-949)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 11/13/2008
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Status of Claims***

Claims 1-10 and 20 have been cancelled.

Claims 11-19 and 21-31 are pending in this application.

Claims 12, 14-16, 18-19, 21-22, 24-25, 27-28, and 30-31 are withdrawn from consideration as non-elected subject matter.

Claims 11, 13, 17, 23, 26, and 29 are under examination in this application.

### ***Response to Amendment***

The recent amendments to the claims have been received and acknowledged by the Examiner.

### ***Response to Arguments***

Applicant's arguments with respect to claims 11, 13, 17, 20, 23, 26, and 29 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 11, 13, 17, 23, 26, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al (J. Org. Chem. 2002, 67, 1712-1715) in view of Abdur-Rashid (Organometallics (2000) 19, 2655-2657).

Applicant claims a process for producing an optically active alcohol comprising placing a metal complex and a ketone in a polar solvent and stirring the mixture under pressurized hydrogen to hydrogenate the ketone compound to thereby obtain an optically active alcohol.

**Determination of the scope and content of the prior art**  
**(MPEP §2141.01)**

Watanabe et al teaches use of the specific catalyst as seen in claim 1 in the process for the production of an optically active alcohol in the presence of formic acid as a hydrogen donor.

Abdur-Rashid teaches that it is known in the art that asymmetric hydrogenation of ketones could be accomplished using a ruthenium catalyst with pressurized hydrogen as a hydrogen donor in the absence of a base. (See the paragraph bridging pages 2656-2657.)

**Ascertainment of the difference between the prior art and the claims**  
**(MPEP §2141.02)**

The difference between the prior art and the claims is that Watanabe et al does not teach the use of no base and uses liquid hydrogen.

**Finding of prima facie obviousness**

**Rational and Motivation (MPEP §2142-2143)**

It is found that Watanabe et al teaches the claimed invention with the exception of the pressurized hydrogen and lack of base. Although this is true, these things are taught by Abdur-Rashid. This is simple substitution of one known element for another. One having ordinary skill in the art at the time of the instant invention would have found it obvious to substitute the H<sub>2</sub> hydrogen donor of Abdur-Rashid for the formic acid hydrogen donor taught by Watanabe et al and carry out the reaction in the absence of a base as taught by Abdur-Rashid. One having ordinary skill in the art would be motivated to substitute one known element for the other depending on such variables as cost and availability. Also, one would be motivated to tweak the reaction conditions of Watanabe et al in order to arrive at the best known process.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KELLETTE GALE whose telephone number is (571)272-8038. The examiner can normally be reached on M-F (6:30am-3:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DANIEL SULLIVAN can be reached on 571-272-0779. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kellette Gale  
Patent Examiner  
Technology Center 1600

**January 29, 2009**

/Daniel M Sullivan/  
Supervisory Patent Examiner, Art Unit 1621